

## CLAIMS

What is claimed is:

1. A knowledge-based comparative information dissemination system, comprising:
  - at least one knowledge model constructed using at least one knowledge block;
  - at least two instantiations of said at least one knowledge model;
  - compiler means capable of accessing the at least one knowledge model and the at least two instantiations of said at least one knowledge model to acquire information necessary to answer a query from a system user with a defined context, said query being related to said at least two instantiations and said compiler means being further capable of combining the information so that it may be displayed to said system user; and
  - display means capable of presenting the combined information to said system user in a format designed to facilitate comparative analysis by said system user.
2. The knowledge-based system as described in Claim 1, wherein the at least one knowledge model is organized as determined by a content author.
3. The knowledge-based system as described in Claim 1, wherein the at least one knowledge model is a human resource knowledge model.
4. The knowledge-based system as described in Claim 1, wherein the at least one knowledge model resides within a knowledge model repository.
5. The knowledge-based system as described in Claim 4, wherein the knowledge model repository comprises at least one human resource knowledge model.



6. The knowledge-based system as described in Claim 5, wherein the at least two instantiations relate to different benefit plans in the at least one human resource knowledge model.

7. The knowledge-based system as described in Claim 1, wherein the at least two instantiations of said at least one knowledge model reside within an information repository.

8. The knowledge-based system as described in Claim 1, wherein the compiler means is capable of accessing the knowledge model repository.

9. The knowledge-based system as described in Claim 1, wherein the compiler means is capable of accessing the information repository.

10. The knowledge-based system as described in Claim 1, wherein said at least one knowledge block is hierarchically organized within said at least one knowledge model.

11. The knowledge-based system as described in Claim 1, wherein the at least one knowledge block comprises rules, text, and variable references.

12. The knowledge-based system as described in Claim 11, wherein the compiler interprets, in view of the user's defined context, the rules, text, and variables contained in said at least one knowledge block.

13. The knowledge-based system as described in Claim 12, wherein the user's defined context consists of elements selected from the group consisting of user-defined employee instantiations, employee group instantiations, employer instantiations, plan instantiations, and effective date.



14. The knowledge-based system as described in Claim 3, wherein the at least one knowledge block comprises rules, text, and variable references.

15. The knowledge-based system as described in Claim 14, wherein the compiler interprets, in view of the user's defined context, the rules, text, and variables contained in said at least one knowledge block.

16. The knowledge-based system as described in Claim 15, wherein the user's defined context consists of elements selected from the group consisting of user-defined employee instantiations, employee group instantiations, employer instantiations, plan instantiations, and effective date.

17. The knowledge-based system as described in Claim 1, wherein said at least one knowledge block is organized by major categories and minor categories within said at least one knowledge model.

18. The knowledge-based system as described in Claim 17, wherein the at least one knowledge block comprises rules, text, and variable references.

19. The knowledge-based system as described in Claim 18, wherein the compiler interprets, in view of the user's defined context, the rules, text, and variables contained in said at least one knowledge block.

20. The knowledge-based system as described in Claim 19, wherein the user's defined context is determined by factors selected from the group consisting of user-defined employee instantiations, employee group instantiations, employer instantiations, plan instantiations, and effective date.

21. The knowledge-based system as described in Claim 1, wherein the combined information is displayed within at least one presentation template.



22. The knowledge-based system as described in Claim 21, wherein the at least one presentation template is formatted in a markup language derived from SGML.

23. The knowledge-based system as described in Claim 22, wherein the markup language is selected from the group consisting of HTML and XML.

24. The knowledge-based system as described in Claim 1, wherein the display process presents the acquired information in a table.

25. The knowledge-based system as described in Claim 24, wherein the table comprises a plurality of cells formed by a first axis providing a plurality of headings, each for selecting one of the at least two instantiations of the at least one knowledge model and a second axis providing at least one heading for selecting the at least one knowledge block comprised by the at least two instantiations of the knowledge model.

26. The knowledge-based system as described in Claim 25, wherein the second axis comprises a plurality of headings.

27. The knowledge-based system as described in Claim 26, wherein a user may select for each heading on the second axis from among a plurality of knowledge blocks comprised by the at least two instantiations of the knowledge model.

28. The knowledge-based system as described in Claim 25, wherein each cell presents information related to each knowledge block relative to the selected instantiation of the knowledge model.

29. The knowledge-based system as described in Claim 25, wherein the headings of the first axis comprise pull-down menus facilitating the selection of one of the different instantiations.



30. The knowledge-based system as described in Claim 27, wherein the headings of the second axis comprise pull-down menus facilitating the selection among at least two of the different knowledge blocks comprised by the different instantiations of the knowledge models.

31. The knowledge-based system as described in Claim 29, wherein cells under a heading of the first axis are updated with knowledge block information in response to selection of a different knowledge model instantiation.

32. The knowledge-based system as described in Claim 30, wherein cells under heading of the second axis are updated with information from the selected knowledge model instantiations in response to selection of a different knowledge block comprised by the different instantiations of the knowledge models.

33. The knowledge-based system as described in Claim 24, wherein the table comprises a first axis providing a plurality of headings, each for selecting among the different instantiations of the knowledge model and different versions of each instantiation.

34. The knowledge-based system as described in Claim 33, wherein the different versions of each instantiation correspond to different time frames for the validity of the information contained in the knowledge blocks.

35. The knowledge-based system as described in Claim 1, wherein the at least one knowledge block references at least one variable, the value of said at least one variable being determined by the compiler means based on variable assignments within an information repository and the user's defined context.



36. The knowledge-based system as described in Claim 35, wherein the appropriate value for said at least one variable is a nullity.

37. The knowledge-based system as described in Claim 35, wherein the user's defined context consists of elements selected from the group consisting of user-defined employee instantiations, employee group instantiations, employer instantiations, plan instantiations, and effective date.

38. The knowledge-based system as described in Claim 37, wherein the user's defined context in which said at least one variable is referenced determines the instantiation relevant to said at least one variable, said relevant instantiation being used to determine the correct variable assignment for said at least one variable and said correct variable assignment being used to determine the appropriate value for said at least one variable.

39. The knowledge-based system as described in Claim 38, wherein the variable assignments are created using attributes selected from the group consisting of employee instantiations, employee group instantiations, employer instantiations, plan instantiations, and effective date.

40. The knowledge-based system as described in Claim 1, further comprising an information server that receives user queries via a user-operated browser and that transfers to the browser the presentations generated by the compiler.

41. The knowledge-based system as described in Claim 1, further comprising an information server that is accessed by another application program and that transfers to users the presentations generated by the compiler in a manner selected from the group consisting of direct and indirect transmission.



42. A knowledge-based comparative information dissemination system designed to provide, to a user having a defined context, specific information based on the user's defined context, the system comprising:

at least one knowledge model constructed using at least one knowledge block that contains at least one reference to at least one variable;

at least one value assigned to the at least one variable;

at least one variable assignment attribute sufficient to determine the appropriate value for said at least one variable;

at least one presentation template organized in a format designed to best convey information to system users operating in different contexts, in which different presentations are capable of incorporating the same knowledge blocks; and

compiler means that delivers presentations to a system user by combining a presentation template with content supplied by the knowledge model and variable attributes from the information repository.

43. The knowledge-based system as described in Claim 42, wherein the appropriate value for said at least one variable is a nullity.

44. The knowledge-based system as described in Claim 42, wherein the at least one knowledge model is a human resource knowledge model.

45. The knowledge-based system as described in Claim 44, wherein the user's defined context consists of elements selected from the group consisting of user-defined employee instantiations, employee group instantiations, employer instantiations, plan instantiations, and effective date.



46. The knowledge-based system as described in Claim 45, wherein the user's defined context in which said at least one variable is referenced determines the instantiation relevant to said at least one variable, said relevant instantiation being used to determine the correct variable assignment for said at least one variable and said correct variable assignment being used to determine the appropriate value for said at least one variable.

47. The knowledge-based system as described in Claim 46, wherein the variable assignments are created using attributes selected from the group consisting of employee instantiations, employee group instantiations, employer instantiations, plan instantiations, and effective date.

48. The knowledge-based system as described in Claim 42, wherein the at least one knowledge block is organized by a content author.

49. The knowledge-based system as described in Claim 42, wherein the at least two values assigned to the at least one variable reside within an information repository.

50. The knowledge-based system as described in Claim 42, wherein the at least one presentation template reside within a presentation template repository.

51. The knowledge-based system as described in Claim 42, wherein the at least one knowledge block is hierarchically organized within the at least one knowledge model.

52. The knowledge-based system as described in Claim 42, wherein the at least one knowledge block is organized by major categories and minor categories within the at least one knowledge model.



53. The knowledge-based system as described in Claim 42, wherein the at least one knowledge block further comprises rules and text.

54. The knowledge-based system as described in Claim 53, wherein the compiler interprets, in view of the user's defined context, the rules, text, and variable references contained in said at least one knowledge block.

55. The knowledge-based system as described in Claim 54, wherein the user's defined context is determined by factors selected from the group consisting of user-defined employee instantiations, employee group instantiations, employer instantiations, plan instantiations, and effective date.

56. The knowledge-based system as described in Claim 42, wherein the value of said at least one variable is determined by the compiler based on variable assignments within an information repository and the user's defined context.

57. The knowledge-based system as described in Claim 56, wherein the user's defined context determines the instantiation relevant to said at least one variable, which in turn defines a value for said at least one variable.

58. The knowledge-based system as described in Claim 57, wherein the variable assignments are created using attributes selected from the group consisting of employee instantiations, employee group instantiations, employer instantiations, plan instantiations, and effective date.

59. The knowledge-based system as described in Claim 42, wherein the display process presents the acquired information in a table.



60. The knowledge-based system as described in Claim 59, wherein the table comprises a plurality of cells formed by a first axis providing a plurality of headings, each for selecting one of the at least two instantiations of the at least one knowledge model and a second axis providing at least one heading for selecting the at least one knowledge block comprised by the at least two instantiations of the knowledge model.

61. The knowledge-based system as described in Claim 60, wherein the second axis comprises a plurality of headings.

62. The knowledge-based system as described in Claim 61, wherein a user may select for each heading on the second axis from among a plurality of knowledge blocks comprised by the at least two instantiations of the knowledge model.

63. The knowledge-based system as described in Claim 60, wherein each cell presents information related to each knowledge block relative to the selected instantiation of the knowledge model.

64. The knowledge-based system as described in Claim 60, wherein the headings of the first axis comprise pull-down menus facilitating the selection of one of the different instantiations.

65. The knowledge-based system as described in Claim 62, wherein the headings of the second axis comprise pull-down menus facilitating the selection among at least two of the different knowledge blocks comprised by the different instantiations of the knowledge models.

66. The knowledge-based system as described in Claim 64, wherein cells under a heading of the first axis are updated with knowledge block information in response to selection of a different knowledge model instantiation.



67. The knowledge-based system as described in Claim 65, wherein cells under heading of the second axis are updated with information from the selected knowledge model instantiations in response to selection of a different knowledge block comprised by the different instantiations of the knowledge models.

68. The knowledge-based system as described in Claim 59, wherein the table comprises a first axis providing a plurality of headings, each for selecting among the different instantiations of the knowledge model and different versions of each instantiation.

69. The knowledge-based system as described in Claim 42, wherein the at least one presentation template is formatted in a markup language derived from SGML.

70. The knowledge-based system as described in Claim 69, wherein the markup language is selected from the group consisting of HTML and XML.

71. The knowledge-based system as described in Claim 42, further comprising an information server that receives user queries via a user-operated browser and that transfers to the browser the presentations generated by the compiler.

72. The knowledge-based system as described in Claim 42, further comprising an information server that is accessed by another application program and that transfers to users the presentations generated by the compiler in a manner selected from the group consisting of direct and indirect transmission.



73. A method of providing information, the method comprising the steps of:  
accessing a presentation template that references at least one knowledge  
block;

incorporating information into the presentation template by means of a  
compiler based on the contents of the at least one knowledge block referenced by the  
presentation template; and

displaying a presentation to a user comprising the presentation template  
and the incorporated information in a format designed to facilitate comparative  
analysis.

74. The method as described in Claim 73 wherein the format is a comparison  
table.

75. The method as described in Claim 73 wherein the presentation template is  
accessed in response to a user query.

76. The method as described in Claim 73, wherein the information is derived  
based on the interpretation by the compiler of the at least one knowledge block.

77. The method as described in Claim 73, wherein the compiler interprets in  
view of the context in which a user is operating rules, text, and at least one variable  
contained in said at least one knowledge block.

78. The method as described in Claim 77, wherein the presentation contains  
human resource-related information and the value associated with the at least one  
variable is determined by the compiler after the user context is determined.



80. The method as described in Claim 73, further comprising hierarchically organizing the content in the at least one knowledge block within the knowledge model.

80. The method as described in Claim 73, further comprising hierarchically organizing the content in the at least one knowledge block within the knowledge model.



81. A method of answering a query about an information system user, the method comprising the steps of:

- a) accessing an information system that comprises:
  - at least one knowledge model constructed using at least one knowledge block;
  - at least two instantiations of said at least one knowledge model;
  - compiler means capable of accessing the at least one knowledge model and the at least two instantiations of said at least one knowledge model to acquire information necessary to answer a query from a system user with a defined context, said query being related to said at least two instantiations and said compiler means being further capable of combining the information with a presentation page so that it may be displayed to said system user; and
  - display means capable of presenting the combined information to said system user in a format designed to facilitate comparative analysis by said system user;
- b) identifying said system user,
- c) identifying the presentation page appropriate to answer the query;
- d) determining the relevant at least two instantiations of said at least one knowledge model;
- e) selecting the relevant at least two instantiations in a presentation template;
- f) inserting relevant employee information into the at least one knowledge block by reference to an information repository to derive information enabling the query to be answered; and
- g) displaying the derived information in a comparative table.



85. The method as claimed in claim 81, wherein the presentation page is identified by a search engine.

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